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April 26, 2011

Dr. Louis Moret
Chair, Investment Policy Subcommittee
California Public Employees' Retirement System
400 Q Street
Sacramento, CA 95814

Re: Revision of Policy for Liquidity Program

Dear Dr. Moret:

You requested Wilshire's opinion with respect to the proposed revisions to the investment policy for the liquidity program.

Recommendation

Wilshire recommends that the Policy Subcommittee adopt the revised policies for the liquidity program as presented.

Background

The policy change presented by Staff sets allowable asset allocation ranges around the short term and treasury portfolios, which were neglected in the prior version of this policy. The total range allowed, +/- 3% around the target total liquidity weight of 4% is broader than we usually see for an asset class with a small target allocation. However, given that this is the lowest risk asset in the CalPERS portfolio and these portfolios provide an element of stability in times of uncertainty and volatility, we support the ranges as presented.

Please let us know if you have any questions or comments.

Best regards,

A handwritten signature in black ink, appearing to read 'Michael Schlachter'.

**CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY**

**FOR
LIQUIDITY PROGRAM**

July 1, 2011~~April 11, 2011~~

This policy is effective immediately upon adoption and supersedes all previous Internally Managed Dollar-Denominated Short-Term Program policies.

I. PURPOSE

The CalPERS Total Fund Statement of Investment Policy adopted by the CalPERS Investment Committee ("Committee"), sets forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the Liquidity Program ("LP Program"). The design of this Policy ensures that investors, managers, consultants, and other participants selected by the California Public Employees' Retirement System ("CalPERS") take prudent and careful action while managing the Programs. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

This Policy is the controlling document for the following Programs:

- A. Attachment A – U.S. Treasury 2-10 year Program ("UST Program");
- B. Attachment B – Internally Managed Dollar-Denominated Short-Term Program ("ST Program").

II. STRATEGIC OBJECTIVE

The LP Programs shall be managed to accomplish the following:

- A. Provide liquid assets that could be converted to cash with little market impact for funding equity oriented ventures during equity market downturns;
- B. Provide a partial hedge to liabilities; and
- C. Provide diversification benefits.

III. RESPONSIBILITIES

- A. CalPERS Investment Staff ("Staff") is responsible for the following:

1. All aspects of portfolio management and oversight including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.
2. Reporting on the performance and risk metrics for each individual LP Program to the Committee, at least annually for externally managed, and quarterly for internally managed LP Programs.
3. Monitoring the internal and external managers in the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Guidelines and Policies ~~at the next Quarterly Report to the Investment Committee, or sooner if~~ All events deemed necessary materially important by the Chief Investment Officer will be reported to the Committee immediately. These reports shall include explanations of any violations and appropriate recommendations for corrective action.

B. The General Pension Consultant ("Consultant") is responsible for:

Monitoring, evaluating, and reporting at least annually, to the Committee, on the performance of the LP Programs relative to the appropriate benchmarks and the Policy.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

- A. The specific performance objective for each LP Program is detailed in the appropriate attachment.
- B. The Benchmark for the LP Program is specified in the Benchmark Modification and Benchmark Details Policy.

V. INVESTMENT APPROACHES AND PARAMETERS

The specific Investment Approaches and Parameters for each LP Program are detailed in the appropriate attachment.

Program allocation targets and ranges are listed below. Allocations are expressed as a percentage of the market value of the CalPERS Fund.

Program Allocations

<u>Component</u>	<u>Target*</u>	<u>Range*</u>
<u>UST 2-10 Year</u>	<u>3%</u>	<u>1% - 5%</u>
<u>ST</u>	<u>1%</u>	<u>0% - 2%</u>
<u>Total Liquidity Program</u>	<u>4%</u>	<u>1% - 7%</u>

*Percentage of the CalPERS Fund

VI. LP PROGRAM CHARACTERISTICS

The LP Program is composed of two portfolios: UST Program and ST Program. The ST Program is designed to have high liquidity to fund the everyday liquidity requirements of the total fund. The UST Program is designed to provide a higher return from yield curve extension over market cycles than the ST Program while also providing for greater diversification to equity markets.

VII. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis as recorded by CalPERS [Custodian](#), unless otherwise provided in attachments.

VIII. GLOSSARY OF TERMS

Key words used in the policy and attachments are defined in CalPERS Master Glossary of Terms.

Approved by the Policy Subcommittee:	April 11, 2011
<u>Adopted by the Investment Committee:</u>	<u>May 16, 2011</u>
<u>Policy Effective:</u>	<u>July 1, 2011</u>

The following attachment was previously an individual policy, and is now consolidated into the Liquidity Program policy. The dates below reflect the revision history for the document:

Attachment B – Dollar-Denominated Short-Term Program – Internally Managed

Approved by the Policy Subcommittee:	September 27, 1996
Adopted by the Investment Committee:	November 18, 1996
Revised by the Policy Subcommittee:	June 11, 2004
Adopted by the Investment Committee:	August 16, 2004
<i>Moved into Low Duration FI Program Policy as Attachment B:</i>	
Approved by the Policy Subcommittee:	April 21, 2008
Adopted by the Investment Committee:	May 12, 2008
Revised by the Policy Subcommittee:	October 20, 2008
Approved by the Investment Committee:	November 17, 2008
Technical Revision to Delete Lehman from Attachment A3:	December 15, 2008
Administrative changes made due to Policy Review Project:	June 16, 2009
Admin changed due to adoption of Benchmark Policy:	October 30, 2009
Revised by the Policy Subcommittee:	December 13, 2010
Approved by the Investment Committee:	February 14, 2011

US TREASURY 2-10 YEAR PROGRAM

July 1, 2011~~April 11, 2011~~

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the UST Program is to exceed the return of the Barclays Capital 2-10 year US Treasury while maintaining a high level of liquidity.

The benchmark for the UST Program is specified in the Benchmark ~~Modification and Benchmark Details~~ Policy.

II. INVESTMENT PARAMENTERS

A. Specific Risk

CalPERS manages the following major categories of fixed income risk:

1. Benchmark Risk was determined by the CalPERS Asset Allocation Unit who determines the benchmark was appropriate for the fund given the objective.
2. Interest Rate Risk must be controlled using duration management. Duration will be +/- 10% of the benchmark on an option adjusted basis. Decisions shall be managed using economic analysis.
3. Yield Curve Risk must be managed in a controlled, disciplined fashion by monitoring key rate durations and principal component analysis.
4. Convexity Risk must be managed using option adjusted and scenario analysis.
5. Sector Risk is controlled by using the ranges below

Sector	BCLL Index	Permitted Ranges
U.S. Treasury	100%	90%-100%
STIF	0%	0%-10%

6. Credit Risk is controlled as only US Treasury securities are allowed in the portfolio.
7. Structure Risk is minimal as US Treasury securities are predominately non-callable.

8. Reinvestment Risk must be managed through cash flow and scenario analysis.
9. Liquidity Risk is controlled by using the following ranges.

U.S. Treasury Maturities	BCLL Index	Permitted Ranges
Nominal 2 – 10 year	100%	70% - 100%
Nominal 0 – 2 year	0%	0% - 20%
Zeros (Principal and Coupons)	0%	0% - 10%

10. Currency Risk is reduced as the portfolio is limited to US Treasury securities which are denominated in US dollars.

B. Restrictions and Prohibitions

1. Leverage is prohibited.
2. Options are prohibited.
3. Investments in any single STIF shall not exceed 5% of the UST Program during the holding period for such investment.

C. Authorized Securities

1. U.S. Treasury (including futures whose deliverable instrument is a U.S. Treasury).
2. STIF from custodial bank or internal CalPERS STIF

IV. DERIVATIVES AND LEVERAGE POLICY

All transactions involving [derivatives](#) and [leverage](#) are governed by CalPERS Statement of Investment Policy for Development of Derivatives Strategies. In addition to the restrictions defined in the Derivatives Policy, the following conditions apply specifically to the UST Program.

A. [Financial Futures](#), [Swaps](#), and [Options](#)

1. [Short selling](#) of securities is prohibited, except in financial futures (as outlined in Section IV. A. 4.);
2. Leverage is prohibited except [futures](#) position where there is an associated cash position (which effectively creates a synthetic bond);

3. The Staff may buy or sell the following fixed income related derivatives: financial futures including [index swaps](#), and [interest rate swaps](#), and
4. Acceptable strategies include bona fide [hedges](#) (to help achieve the target durations) and strategies that result in a more efficient method of implementing the investment objectives of the Program.

B. Restrictions and Prohibitions

1. [Uncovered Call](#) writing is prohibited.
2. [Speculation](#) or [arbitrage](#) between two derivatives is prohibited. If a derivative is more attractively priced than the underlying security, the transaction is considered a substitution.

C. Counterparty Exposure for Options, Swaps and Futures

Transactions shall be executed with only domestic or non-U.S. brokers registered in the U.S. or the U.K. with a short-term debt rating of at least A1 ([S&P](#)) and at least P1 ([Moody's](#)), or rated on a long-term at least A3 (Moody's) and at least A- (S&P). CalPERS internal research staff shall actively review these brokers.

INTERNALLY MANAGED DOLLAR-DENOMINATED SHORT-TERM PROGRAM

July 1, 2011~~April 11, 2011~~

I. PERFORMANCE OBJECTIVE AND BENCHMARK

The performance objective for the Dollar-Denominated Short-Term Program ("ST Program") is to exceed the benchmark.

The benchmark for the Internally Managed Dollar-Denominated Short-Term Program is specified in the Benchmark ~~Modification and Benchmark Details~~ Policy.

II. INVESTMENT APPROACHES AND PARAMETERS

A. Investment Approach

The goals of the ST Program are to provide liquidity to CalPERS and to maximize investment returns at a prudent level of risk. The investment approach is to identify opportunities in the short end of the [yield curve](#) and invest where risks are understood and manageable, while maintaining liquidity, credit quality, [weighted-average days to maturity](#), and diversification as specified in this Policy.

To ensure liquidity, all ST Program investment transactions shall be made in conjunction with CalPERS projected cash flow needs.

B. Specific Risk Parameters

CalPERS shall manage the following major categories of short-term risk:

1. [Benchmark Risk](#) was reviewed by the Consultant who determined that the SSB STIF is the appropriate reference point for the ST Program.
2. [Liquidity Risk](#) must be managed within the context of CalPERS projected cash flow needs.
3. [Interest Rate Risk](#) must be managed using [economic analysis](#), [Federal Open Market Committee](#) analysis, and projected cash flow requirements of CalPERS. All securities purchased shall have a maximum final stated maturity of 15 months **except** for the following securities:

- a. [Callable securities](#) having a high probability of being “called” as projected using [option-adjusted](#) and [scenario analysis](#). Callable [securities](#) shall have a maximum anticipated time to call of 12 months.
 - b. Fixed rate [asset-backed securities](#) shall have a maximum projected [average life](#) of 15 months and a final stated maturity that does not exceed 5 years.
 - c. Floating rate asset-backed securities shall have a maximum projected average life of 3 years and a final stated maturity that does not exceed 5 years.
 - d. [Corporate](#) and U.S. Government [Agency floating rate securities](#) shall have a final stated maturity not exceeding 3 years.
 - e. Securities with short-term [ratings](#) that are [split-rated](#) shall have a maximum final stated maturity of 120 days (including floating rate securities).
 - f. Securities rated A2/P2 shall have a maximum final stated maturity of 75 days (including floating rate securities).
 - g. [Deliveries versus payment repurchase agreements](#)—(DVP Repo) [and tri-party repurchase agreements](#) are limited to a maximum of 14 days from the trade date to the date of repurchase.
 - h. Investments in short-term obligations of issuers domiciled outside the United States shall have a maximum final stated maturity of 120 days.
4. [Yield Curve Risk](#) must be managed in a controlled, disciplined fashion by employing [break-even](#) and economic analysis.
 5. [Credit Risk](#) must be managed with a goal of zero [defaults](#). A downgrading of a security, which causes a violation of the Policy, shall not require an immediate sale if the [Senior Investment Officer](#) of Global Fixed Income believes that no further risk of credit deterioration exists, or that the sale diminishes the total rate of return to CalPERS. CalPERS internal research staff and the external rating agencies shall be utilized in analyzing such situations to ensure that an informed decision is made. The following are minimum credit quality standards for each of the sectors:

- a. U.S. Treasury & U.S. Government Agency securities shall have a credit quality rating of AAA.
 - b. Asset-backed securities must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1) or rated on a long-term debt obligation basis by [Moody's](#) (Aaa) and [S&P](#) (AAA).
 - c. Broker/dealer securities must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1).
 - d. Domestic [money market securities](#) must be in one of the two highest rating categories for short-term debt obligations (A2/P2 or higher). If the security is only rated by one of the credit agencies (S&P or Moody's) then the security must be in the highest rating category for short-term debt obligations (A1+, A1 or P1). All corporate issuers with a short-term rating below A1/P1 shall be monitored by the CalPERS internal research staff annually or as events warrant.
 - e. Domestic corporate securities ([bonds](#), [notes](#), [medium term notes](#), and floating rate securities) without a short-term debt obligation rating must have a minimum long-term debt obligation rating by Moody's of A2 and by S&P of A.
 - f. Investments in U.S. Dollar bonds and money market securities issued in the United States by foreign borrowers ([Yankee](#)) or U.S. Dollar bonds and money market securities issued outside the United States by domestic or foreign borrowers ([Eurodollar](#)) must be debt obligations of companies located in a country with a long-term [sovereign](#) rating by Moody's of Aa3 (or higher) and by S&P AA- (or higher) and have a short-term rating of A1/P1 (or higher).
6. [Structure Risk](#) must be managed using option adjusted and scenario analysis.
7. [Reinvestment Risk](#) must be managed through [call risk](#) and cash flow analysis.
- C. Authorized Securities
- 1. U.S. Treasury and U.S. Government Agencies including U.S. Treasury strips;

2. Publicly traded domestic corporate bonds, notes, and medium term notes;
3. Asset-backed securities collateralized by credit cards, automobile loans, or leases and agricultural equipment;
4. Publicly and [privately traded domestic money market securities](#);
5. Floating rate securities tied to [LIBOR](#), [Fed Funds](#), Treasury bills and [commercial paper](#) indices;
6. [State Street Bank Short Term Investment Fund](#) (STIF);
7. Delivery Vs. Payment and Repurchase Agreements ~~Repos~~ and Tri-party repurchase agreements;
8. Broker/Dealer Securities;
9. U.S. Dollar bonds and money market securities issued in the United States by foreign borrowers (Yankee); and
10. U.S. Dollar bonds and money market securities issued outside the United States by domestic or foreign borrowers (Eurodollar).

D. Restrictions and Prohibitions

1. Investments in a single [issuer](#) (including parent, subsidiary and guaranteed debt) whose securities are rated A1+/P1 or A1/P1, shall not exceed 10% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities in excess of 7 days shall not exceed 5% of the ST Program. For asset-backed securities, each separate trust (pool of assets) is defined as a separate issuer.
2. Investments in a single issuer (including parent, subsidiary and guaranteed debt) whose securities are [split-rated](#) (A2/P1 or A1/P2), shall not exceed 6% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities exceeding 7 days shall not exceed 3% of the ST Program.
3. Investments in a single issuer (including parent, subsidiary and guaranteed debt) whose securities are rated A2/P2, shall not exceed 4% of the ST Program over the holding period for such investments. However, holdings in such issuers with maturities exceeding 7 days shall not exceed 2% of the ST Program.

4. Aggregate investments in securities split-rated or A2/P2 shall not exceed 30% of the ST Program over the holding period for such investments.
5. Aggregate investments in floating rate securities shall not exceed 50% of the ST Program over the holding period for such investments.
6. Aggregate investments in fixed rate asset-backed securities shall not exceed 25% of the ST Program over the holding period for such investments.
7. Aggregate investments in DVP Repos with maturities exceeding the next business day shall not exceed 20% of the ST Program.
- ~~8. Tri-party repurchase agreements are prohibited.~~
8. Non-dollar denominated securities are prohibited.
9. Collateralized mortgage obligations and mortgage-backed securities are prohibited.
10. Financial futures and options are prohibited.

E. Counterparty Exposure for DVP Repos

1. The lesser of \$200 million or 25% of the total ST Program can be maintained with any one counterparty for DVP Repos.
2. The counterparty must be in the highest rating category for short-term debt obligations (A1+/P1 or A1/P1). Transactions shall be executed with only domestic brokers. The CalPERS internal research staff shall actively review these brokers.
3. Collateral received on a repurchase agreement must consist of U.S. Treasury or U.S. Government Agency securities with a maximum final stated maturity of 5 years. All collateral must be marked-to-market on a daily basis and maintained at 102% of the amount of funds loaned plus accrued interest.

III. CALCULATIONS AND COMPUTATIONS

- A. Calculations and computations shall be on a mark-to-market or amortized cost method depending on market convention. Securities for which there are market quotations readily available shall be accounted for utilizing the mark-to-market method. When no market quote is available, the amortized cost method shall be used for determining the securities value.

- B. For securities with periodic principal payments, the weighted-average days to maturity calculation shall be calculated from the [evaluation date](#) to the date of the security's average life.
- C. For floating rate securities, the program weighted-average days to maturity calculation shall be calculated from the evaluation date to the date of the next coupon reset.
- D. References to short-term [credit ratings](#) shall be presented with S&P rating first followed by Moody's (i.e., S&P (A1) and Moody's (P1) shall be presented as A1/P1).

Staff is developing a new
glossary of terms for the Liquidity
Program Policy